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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/617,773

07/14/2003

Ryoko Miyachi

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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/617,773	<b>Applicant(s)</b> MIYACHI ET AL.	
	<b>Examiner</b> Charles Chow	<b>Art Unit</b> 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8, 9-12/5, 13/8 is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 9/1, 12/1, 13/4 is/are rejected.
- 7) ☒ Claim(s) 10/1 and 11/1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Detailed Action**

1. This office action is for amendment received on 2/2/2006.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung (US 6,484,110 B1) in view of Camp Jr. et al. (US 6,236,214 B1).

Regarding **claim 1**, Jung teaches a cellular mobile phone [Fig. 1, col. 4, lines 12-13 & col. 3, lines 29-34] which is driven by a battery 160 [col. 1, lines 32-33],

the mobile phone [Fig. 1, col. 4, lines 12-13] comprising a control unit [ microprocessor 182, in col. 4, line 60, Fig. 1] for calculating available time [S105] for the cellular mobile phone [ col. 4, lines 59-64],

while updating, when necessary, data that indicates remaining capacity of the battery in terms of the terminal voltage of the battery [ while looping back from S108 to S103 in the loop, for reading, updating, capacity mAh & battery terminal voltage data indicating the capacity at S103, in order to recalculate the available time, after a preset time in S108, Fig. 4, col. 4, lines 49 to col. 5, line9],

displaying thereon the calculated available time [ S106, Fig. 4].

wherein the control unit [182] also has the function of calculating the available time for the cellular mobile phone base on the magnitude of the battery's current which is required in accordance with a radio wave receiving intensity in the cellular mobile phone [ the reading of current & signal strength in S104 & the calculating available time in S105, Fig. 4; the reading

of current consumption corresponding to measured signal strength in both mode, abstract;  
col. 4, lines 57-58]

Jung mentions in abstract to display available time in vision, but fails to show a display unit of a cellular mobile telephone.

Camp Jr. et al. (Camp) teaches a display 16 of the cellular mobile phone 10 for displaying remaining talk time [Fig. 11, col. 7, lines 10-13], in order to conveying the available talk time to user via a display [col. 2, lines 56-58]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Jung with Camp's display 16, in order to conveying the available talk time to user via a display.

Regarding **claim 2**, Camp teaches the further comprising a temperature detection unit for detecting temperature near the battery [thermocouple 20 detects temperature near battery 12, Fig. 6, col. 5, lines 11-30],

wherein the control unit [ microprocessor 22] also functions to correct the data that indicates the remaining capacity in accordance with the detected temperature [ the tracking, updating, current, capacity, col. 5, lines 51-62].

Regarding **claim 4**, Jung teaches a cellular mobile phone [Fig. 1, col. 4, lines 12-13 & col. 3, lines 29-34] which is driven by a battery 160 [col. 1, lines 32-33],

the circuit in Fig. 1 comprising a control unit [ microprocessor 182, col. 4, line 60, Fig. 1] for calculating available time [S105] for the cellular mobile phone [ col. 4, lines 59-64],

while updating, when necessary, data that indicates remaining capacity [mAh in S103] of the battery in terms of the terminal voltage of the battery [ while looping back from S108 to s103, for reading, updating, capacity mAh & battery terminal voltage at S103, in order to recalculate the available time, after preset time in S108, Fig. 4, col. 4, lines 49 to col. 5, line9],

displaying thereon the calculated available time [ S106, Fig. 4].

wherein the control unit [182] also has the function of calculating the available time for the cellular mobile phone base on the magnitude of the battery's current which is required in accordance with a radio wave receiving intensity in the cellular mobile phone [ the reading of current & signal strength in S104 & the calculating available time in S105, Fig. 4; the reading of current consumption corresponding to measured signal strength in both mode, abstract; col. 4, lines 57-58]

Jung mentioned, in abstract, the displaying of available time in vision to inform user, but fails to teach a semiconductor integrated circuit for a cellular mobile phone & a display unit of a cellular mobile telephone.

Camp Jr. et al. (Camp) teaches a semiconductor integrated circuit [ integrated circuit 20-24, Fig. 6] & a display 16 of the cellular mobile phone 10 for displaying remaining talk time [Fig. 11, col. 7, lines 10-13], in order to conveying the available talk time to user via a display [col. 2, lines 56-58]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Jung with Camp's display 16, in order to conveying the available talk time to user via a display.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9/1,13/4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung in view of Camp, as applied to claims 1, 4 above, and further in view of Sklovsky (US 6,710,578 B1).

Art Unit: 2685

Regarding **claim 9/1**, Jung teaches a cellular mobile phone [Fig. 1, col. 4, lines 12-13 & col. 3, lines 29-34] which is driven by a battery 160 [col. 1, lines 32-33].

Jung & Camp fail to teach the phone comprising a control unit for exercising control in order to reduce, in accordance with the magnitude of remaining available capacity of the battery, the number of times a process for making a backup of user data is performed.

Sklovsky teaches these features [ the radiotelephone 102, Fig. 1, having control unit processor 116 for exercising control steps in Fig. 2/ Fig. 4, to restrict operation mode, abstract, to select the operation mode based on the remaining battery capacity, col. 5, lines 40-63; & the user internal data saved until recharging, col. 6, lines 20-34 ], in order to extend the battery lifetime for further usage [col. 2, lines 4-7] by reducing the power consumption [col. 1, lines 6-10] by managing the power source [abstract]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Jung & Camp with Sklovsky's processor controlled battery saving mode & saving user data, in order to prevent the loss of user data in the battery saving mode.

Regarding **claim 13/4**, Camp teaches a semiconductor integrated circuit for a cellular mobile phone [integrated circuit 20-24, Fig. 6, for cellular phone 10] which is driven by a battery 12, the circuit comprising a control unit [22].

Jung & Camp fail to teaches a control unit for exercising control in order to reduce, in accordance with the magnitude of remaining available capacity of the battery, the number of times a process for making a backup of user data is performed.

Sklovsky teaches these features [ the radiotelephone 102, Fig. 1, having control unit processor 116 for exercising control steps in Fig. 2/ Fig. 4, to restrict operation mode, abstract, to select the operation mode based on the remaining battery capacity, col. 5, lines 40-63; the not to save user internal data using radio communication mode, for the data

backup, based on battery capacity in col. 6, lines 20-34], in order to extend the battery lifetime for further usage [col. 2, lines 4-7] by reducing the power consumption [col. 1, lines 6-10]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Camp with Sklovsky's reducing the saving user data, in order to extend the battery lifetime.

4. Claim 12/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jung in view of Camp, Sklovsky, as applied to claim 9 above, and further in view of Tso (US 2003,0023,673 A1).

Regarding **claim 12/1**, Camp & Sklovsky fail to teach the wherein the control unit also functions to find and delete unnecessary data in the user data if remaining capacity of a memory in which the backup of the user data is to be stored is insufficient.

Tso teaches these features, the control unit 102 of the wireless PDA [Fig. 1] notify user of the insufficient memory remaining capacity for user data backup, and user needs to find the unnecessary data & delete them, to re-organize data for back up storing, [paragraph 0034], in order to backup large amount of data while traveling [0008]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Camp & Sklovsky with Tso's find & delete unnecessary data, in order to backup large amount of user data.

#### **Allowable Subject Matter**

5. The following is an examiner's statement of reasons for allowance:

Claims 5-8, are previously allowed, office action mailed on 11/3/2005. Due to applicant amending of the dependency for claims 9, 13, therefore, claims 9-12/5, 13/8 are also allowable due to dependency upon allowed claims 5, 8, and having further claimed features.

Art Unit: 2685

Claims 5-8, 9-12/5, 13/8 are allowable over the prior art of record, the prior art fails to teach the allowable features, singly, particularly, or in combination, for the feature of a **transmit/receive unit for providing an external device with notification of measured terminal voltage and current, and receiving notification of available time** for the cellular mobile phone, wherein the external device has calculated the available time while updating data, when necessary, which indicates remaining capacity of the battery in terms of the terminal voltage of the battery, and display unit for displaying thereon the notified available time [claims 5, 8], for the controlling of operating communication time with the external device, base station. The dependent claims 6-7 are also allowable due to their dependency upon the independent claims and having additional claimed features.

The closest prior art to **Bigwood et al. (US 2002/0086,718 A1)** teaches the mobile units 3 for over the air transmitting of the battery parameter, battery condition, to fleet controller of mobile units, for notifying current battery capacity condition [Fig. 1-2, abstract, paragraphs 0011-0018]. Bigwood et al. fail to teach **the transmitting of battery voltage, current, information, & receiving calculated available time from external device, while mobile phone updating data, the external device calculating the available time.**

**Higuchi et al. (US 2001/0008,424 A1)** teaches the micro-computer 63 of the video camera 60 communicates with the battery 1 via communication circuit 65, for receiving the residual battery capacity, charging/discharging current, detected voltage from battery 1, for displaying the calculated result of the residual battery capacity [abstract, Fig. 1/Fig. 6]. Higuchi fails to teach the cellular phone for transmitting battery voltage, current to external device, instead of external device sending battery voltage, current, information to video camera, and fail to teach the cellular phone receiving calculated available time from external device, while updating data.



Other prior arts in below has been considered, but they fail to teach the above claimed features.

**Green Jr. et al. (US 6,201,372 B1)** teaches portable telephone having battery pack gauge for indicating the battery remaining capacity to portable phone, for a decision to switch into a power saving mode [abstract, Fig. 1].

**Kawahara et al. (US 5,739,674)** teaches the portable unit 1 for transmitting remaining battery capacity indication signal to communication unit 2 according to the battery capacity range of the indicator lamp in a system 10 [abstract, Fig. 1].

**Ooi et al. (US 2004/0104,706 A1)** teaches a battery pack 4 communicates with a electrical equipment 1 with the battery information, for the displaying of remaining battery capacity on the electrical equipment 1 [abstract, Fig. 1].

Other prior arts are considered, but they do not teach the above allowable feature:

**Ishida (US 6,313,832 B1), Choo (US 2002/0093,312 A1), Patino et al. (US 6,384,578 B1), Uskali et al. (US 5,455,499).**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Claims Objection***

6. Claims 10/1, 11/1 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 10/1, the above cited prior arts fail to combine for teaching the wherein the control unit functions to delay the backup process, if the remaining capacity of the battery is sufficiently larger than necessary capacity for the backup process.

Regarding claim 11/1, the above cited prior arts fail to teach the backup of user data selected from among an internal memory, a home memory for managing subscriber information, and an external memory.

### ***Response to Arguments***

7. Applicant's arguments with respect to claim 1-2, 4, 9/1, 12, 13/4 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's amendment based on the no teachings for the wherein the control unit also has the function of calculating the available time for the cellular mobile phone base on the magnitude of the battery's current which is required in accordance with a radio wave receiving intensity in the cellular mobile phone [ pages 6-7 of applicant's amendment 2/2/2006].

**Jung (US 6,484,110 B1)** teaches these features wherein the control unit [182] also has the function of calculating the available time for the cellular mobile phone base on the magnitude of the battery's current which is required in accordance with a radio wave receiving intensity in the cellular mobile phone [ the reading of current & signal strength in S104 & the calculating available time in S105, Fig. 4; the reading of current consumption corresponding to measured signal strength in both mode, abstract; col. 4, lines 57-58].

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2685


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles C. Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.  
  
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow 

March 12, 2006.

  
EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
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